

REMARKS

In light of the above amendments and following remarks, reconsideration and allowance of this application are respectfully requested.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-40 are pending in this application and are rejected in the Office Action. In this response, independent claims 1, 11, 21, and 31 have been amended.

It is submitted that these claims are patentably distinct from the prior art cited by the Examiner, and that these claims are in full compliance with the requirements of 35 U.S.C. §112. The remarks made herein are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112, but rather the amendments and remarks made herein are simply for clarification and to round out the scope of protection to which Applicants are entitled.

Initially, while reviewing the application, the Applicant discovered typographical errors on pages 3 and 6 that resulted in inconsistencies between the specification and the drawings. The specification has been amended to correct these errors.

No new subject matter is added as a result of the amended claims or the amended specification.

II. THE REJECTIONS UNDER 35 U.S.C. §§ 102(b) and (e)

As recited in amended independent claim 1, Applicant's invention is directed to a layer that is used in a papermakers' fabric that includes a plurality of land areas and a plurality of groove areas. The layer also includes a plurality of perforations that extend from a top surface to a bottom surface of the layer. The land areas, groove areas, and perforations all combine to minimize pattern formation on the paper sheet.

Independent claims 1, 11, 21 and 31 have been amended to include that the perforations extend through the layer from a top surface to a bottom surface of the layer and that the land areas, groove areas and perforations combine to minimize pattern formation on the paper sheet.

In the present invention, pattern formation is minimized by diffusing water flow at the perforated layer of the papermakers' fabric. The diffusion of flow reduces the pressure drop across the layer and thereby reduces migration of fines, which has the effect of reducing/avoiding the light/dark pattern that such migration imparts to the paper sheet. Page 6, lines 28-33.

In numbered paragraph 1 of the Office Action, claims 1-4, 6, 7, 10, 31-34, 36, 37, and 40 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,193,847 to Trokhan ("Trokhan"). The rejections are traversed for at least the following reasons.

Trokhan is directed to a papermaking belt comprising a framework and a reinforcing element. Col. 3, lines 66-67. The framework comprises deflection conduits and synclines and defines a first surface of the belt. The framework preferably defines a predetermined pattern that imprints a like pattern onto the paper in contact with its surface. Col. 4, lines 5-20. Therefore, Trokhan does not disclose a papermaking fabric that minimizes pattern formation. Instead, Trokhan is directed to a papermaking belt that increases sheet marking in the form of a pattern that is imprinted on a paper sheet. Therefore, Trokhan teaches away from a belt that minimizes pattern formation.

In numbered paragraph 2 of the Office Action, claims 1-6, 11-16, 21-26, and 31-36 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,514,386 to Watanabe ("Watanabe"). The rejections are traversed for at least the following reasons.

Watanabe is directed to a laminated papermaking felt comprising a base body and a composite batt layer with a film layer disposed within the composite batt layer. Col. 2, lines 52-56. The Examiner equates the film layer to the layer of the instant invention. The film layer contains elongate ridges, col. 3, lines 7-8, that the Examiner equates to rectangular grooves and lands. Watanabe is directed towards solving a different problem associated with prior art felts, specifically that the elasticity of prior felts could not be satisfactorily maintained over a long period of time. Col. 1, lines 33-40. Thus, the thickness of the film that is used to construct the film layer (the layer that includes the ridges) is very thin, between 20 to 1000 microns. Because of this thin layer and the ridges associated with the film layer, the felt in Watanabe is capable of running flexibly and smoothly on the turning sections of the rolls and resists becoming flat by fatigue, even if subjected to repeated compression in a press nip. Col. 5, lines 55-64. Therefore, Watanabe does not teach nor provides for the film layer affects localized fluid dynamics in order to reduce pattern formation on a paper sheet.

In numbered paragraph 3 of the Office Action, claims 1-40 are rejected under § 102(e) as being anticipated by U.S. Patent No. 6,726,809 to Joyce et al. ("Joyce"). The rejections are traversed for at least the following reasons.

In the Office Action, the Examiner is equating the laminated fabric of Joyce (not the individual layers that are laminated together) to the subject layer of the instant invention. Joyce is directed to industrial process fabrics having embossed surfaces to facilitate water removal from a paper product. The process fabric is a laminated structure with at least one embossed fabric so that when the fabrics are laminated together, internal void volume is created. *See* col. 2, line 59 to col. 3, line 28. Voids for storing water are provided in the form of embossments, which can be circular. Col. 4, lines 52-65. The embossments, however, do not extend through

from a top surface to a bottom surface in any of the individual fabrics that comprise the completed laminated fabric. Instead, only one side of the individual fabrics includes the embossments while the other side remains flat. Col. 4, lines 42-44. This is depicted in Figures 2, 3, and 4, which show the internal voids created by the embossments only extending partially through the individual layers of the fabric and not from one side of the individual fabric through to the other. This also results in a laminated fabric that does not have embossments that extend through the fabric. Therefore, since the Examiner's analysis compared the laminated fabric of Joyce to the layer of the present invention, and since the instant invention has perforations that extend through the layer from a top surface to a bottom surface, the instant invention differs from Joyce.

Furthermore, the embossments in Joyce are used to create void volume within the belt in order to facilitate water removal from a paper sheet or web by providing temporary storage sites for the removed water. *See Abstract*. In the present invention, however, the land areas, groove areas and perforations of the layer are designed to affect localized fluid dynamics in the fabric in order to reduce pattern formation on a paper sheet.

In numbered paragraph 4 of the Office Action, claims 1-5, 8, 11-15, 18, 21-25, 28, 31-35, and 38 are rejected under § 102(b) as being anticipated by U.S. Patent No. 1,925,917 to Chalon ("Chalon"). The rejections are traversed for at least the following reasons.

Chalon is directed to a paper press belt with perforations having flaps at the bottom. The flaps remain open under no load to let off water that is pressed out of the fabric but close when load is applied to the belt in order to prevent the perforations from forming an impression on the paper sheet. Col. 1, lines 35-45. When the flaps close, the belt's surface is perfectly smooth. Col. 1, lines 46-48. The belt may be smooth on both sides or may include designs in the form of

ribs. These ribs may be located on either side of the belt, the side that does not come in contact with the paper sheet or the side that does come in contact with the paper sheet. Col. 2, lines 74-85. The Examiner characterizes the ribs as forming land areas and groove areas on the belt.

The belt in Chalon differs from the instant invention in many ways. First the “perforations” in Chalon are different. In the instant invention, the perforations, which extend from a top surface to a bottom surface of the layer, are flapless and exist throughout the papermaking process because they are not affected by pressure. In Chalon, the “perforations” do not exist throughout the papermaking process. Instead, they are pressure sensitive and have flaps that close when pressure is applied to the belt. Therefore, Chalon does not have perforations extending from a top surface to a bottom surface of the layer throughout the entire papermaking process.

Next, in Chalon, the perforations do not exist in only a layer of the belt. Instead, the perforations 11 are cut through the full thickness of the belt. Col. 2, lines 1-2. This is also depicted in Figure 4, which shows perforation 11 extending completely through the entire thickness of the belt 10. In the instant invention, the perforations exist in only a layer of the papermakers’ belt and not through the entire thickness of a belt. Page 6, lines 24-27.

Lastly, the perforations and ribs of the Chalon belt are not designed to reduce marking of a paper sheet by affecting localized fluid dynamics, as is the case in the instant invention. Instead, impressions on the paper sheet are avoided by the closing of the perforation flaps when the belt is under pressure. Col. 1, lines 35-45. Further, when the ribs are located on the side of the belt in contact with a paper sheet, a pattern will be imparted to the sheet. Col. 2, lines 81-85. Therefore, Chalon teaches away from solving the problem that the present invention seeks to solve, specifically, minimizing pattern formation on a paper sheet.

For at least the foregoing reasons, it is respectfully submitted that revised independent claims 1, 11, 21, and 31 patentably distinguish over Trokhan, Watanabe, Joyce, and Chalon and are therefore allowable. Further, claims 2-10, 12-20, 22-30, and 32-40 which depend from claims 1, 11, 21, and 31 respectively, are allowable therewith.

The Examiner has apparently made of record, but not applied, several documents. The Applicant appreciates the Examiner's implicit finding that these documents, whether considered alone or in combination with others, do not render the claims of the present invention unpatentable.

Statements appearing above with respect to the disclosures in the cited references represent the present opinions of the Applicant's undersigned attorney and, in the event that the Examiner disagrees with any such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the respective reference providing the basis for a contrary view.

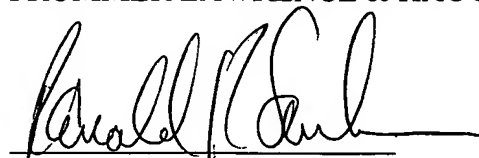
CONCLUSION

In view of the foregoing, it is believed that all of the claims in this application are patentable over the prior art, and an early and favorable consideration thereof is solicited.

Please charge any fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

Respectfully submitted,
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